UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,995	11/04/2003	Christopher Hahn	003797.00677	5612

28319 7590 04/23/2007

BANNER & WITCOFF, LTD.
ATTORNEYS FOR CLIENT NOS. 003797 & 013797
1100 13th STREET, N.W.
SUITE 1200
WASHINGTON, DC 20005-4051

EXAMINER	
VU, TUAN A	

ART UNIT	PAPER NUMBER
2193	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/700,995	HAHN ET AL.	
	Examiner	Art Unit	
	Tuan A. Vu	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the Applicant's response filed 2/6/07

As indicated in Applicant's response, claim 6 has been amended. Claims 1-21 are pending in the office action.

Claim Objections

2. Claims 7-9, and 20-21 are objected to because of the following informalities: claim 7 recites 'data file comprises a table'; and claims 20-21 recite 'formatting ... value combinations into a table mark up with a markup language'. The disclosure mentions about a form of table being included in a XML file (See Specifications, Brief Summary, pg. 2; 3rd para, pg. 5; Fig. 2; last para, pg. 6; e.g. '*data file 204 that includes a test case table 206*'). It appears that 'table' is mere table-related data being used as to populate a file and formatted as XML. But this is not explicit from the claim. It is no proper to state that a table is included in a XML format. The idea of a table being included in a markup file does not come in agreement with a more commonly accepted meaning of a table and that of a markup language as understood by one skilled in the art; according to which, a markup page does not reasonably contain a table, but rather contains tagged elements. That is, a file that contains a table would be for example, a Spreadsheet or a PDF tabular image, not an XML format. The language is bordering on lack of description in the 35 USC 112 type of impropriety. As set forth above, the format of the XML file in Figure 3 only shows text format gathering of data coming from an external source, e.g. a spreadsheet (see pg. 5, 3rd para – Note: the spreadsheet is a file that includes a table); hence the use of language such as mentioned from above needs to be corrected; for the table here appears to be a distinct tabular set of data being formulated into a file formatted in special markup

standard. The claim language should be corrected, for example, as file using XML format to implement the data of an external table. The 'table' limitation will be treated as mere structured data being specially formatted to populate a file, be it an XML file; or at best, as though a file implements content of a table.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-4 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

> The Federal Circuit has recently applied the practical application test in determining whether the claimed subject matter is statutory under 35 U.S.C. § 101. The practical application test requires that a " useful, concrete, and tangible result" be accomplished. An "abstract idea" when practically applied is eligible for a patent. As a consequence, an invention, which is eligible for patenting under 35 U.S.C. § 101, is in the "useful arts" when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The test for practical application is thus to determine whether the claimed invention produces a "useful, concrete and tangible result".

Specifically, claim 1 recites a medium having a data structure with value combinations for use to test a software module, comprising a first section having parameters list; a second section having parameter values listed in some order; and a third section having parameter values listed in some order relative to the first parameter list. As a whole, the claim amounts to a product comprising of descriptive nonfunctional software entities stored thereon. That is, when the computer-readable medium is read by a computer, the recited elements remain static with respect to the reading by the computer operating system, and absent any functional component

component when executed by the operating system (of the recipient computer) to otherwise extract data thus enabling realization of the possible interaction among the above listed parameter listed values, it is impossible to construe that data transformation would take place using the stored data structure content to yield computer result being tangible to the user (who attempts to make use of the computer stored parameter list). Therefore, the stored parameter sections remain nonfunctional descriptive element per se, hence not sufficiently statutory. The claim fails to reasonably convey interaction between these descriptive entities in order for one skill in the art to be apprised on a possible result being subsequent to this interaction, in terms of application results that are deemed concrete, useful and tangible as required by the Practical Application Test. The claim is rejected for leading to a non-statutory subject matter.

Claims 2-4 do not appear to remedying to the above deficiency, and are also rejected.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-10, 12-14, and 16-19 are rejected under 35 U.S.C. §102(e) as being anticipated by Mandava et al., USPubN: 2004/0128584 (hereinafter Mandava).

As per claim 1, Mandava discloses a computer-readable medium having thereon a data structure identifying parameter value combinations for use to test a software module (e.g. Test

suite - Fig. 5; Fig. 1B-1, *assertion Document, static XML* - Fig. 3A; para 0067 - 0071), the data structure comprising:

(a) a first section that includes a set of testing parameters listed in a parameter order (Table 1, pg. 5; *describes* --para 0068, 0069, 0070 pg. 5 – Note: each enclosing tags reads on parameter listed to define a enclosed element);

(b) a second section that includes a first set of parameter values listed in an order such that each value is positioned in the same order as the corresponding parameter is listed in the parameter order (*defines* --para 0071, 0074, pg. 5 – Note: for each enclosing pair of tags that describes, a definition of such pair of enclosing tags being the value inside the enclosing tag reads on parameter values listed in same order as the list of parameters being listed); and

(c) a third section that includes a second set of parameter values listed an order such that each value is positioned in the same order as the corresponding parameter is listed in the parameter order (e.g. Table 1, pg. 5, <*sub-assertions*>, bottom L col; <*sub-assertion*> top R col; pg. 7, pg. 9 – Note: definitions inside each assertion tags are values of the defining tags, and each section of <assertion> being defining tag pairs reads on second or third section including parameter listed in same order as position of corresponding parameter definition).

As per claims 2-3, Mandava discloses wherein the testing parameters are marked up with a markup language; wherein the markup language comprises the extensible markup language (Assertion Document - see pg. 7, 9).

As per claims 4-5, Mandava discloses wherein the first section, second section and third section are elements of a table (e.g. Fig. 3G; para 0120, Fig. 3D-1, 2, 3; Table 5); wherein the table – see Table 5, *chapter* para 0120 -- comprises additional sections that include sets of

parameter values (Note: each covered assertion reads on additional *Assertion* sections to be included in test suite for coverage as depicted in Fig. 3D-1, 2, 3).

As per claim 6, Mandava discloses

extracting parameter value combinations from a data file marked up with a markup language (e.g. Table 1, 8; Fig. 3D-1, 2, 3; Fig. 3F-1, 2);

transmitting the parameter value combinations to a software module test engine (e.g. *Assertions tested by test suite* - Fig. 3G);

testing a software module with the parameter value combinations (e.g. para 0149, pg. 14; Figs 3).

As per claim 7, Mandava discloses that the data file comprises a table containing a plurality of test cases and each test case comprises a set of parameter value combinations (refer to claim 4; according to which, the *assertion* based on Chapter and listed in the XML/DTD files being extracted for creation of test suite table so that the test suites generated from the assertions test being extracted to yield a table of test **read on** data file comprising a table of test cases with combinations of parameter value – see value definition of tag <assertion> from claim 1)

As per claims 8-9, Mandava discloses wherein (a) comprises extracting the plurality of test cases from the data file including creating an object from a test case parameter value combination (refer to claim 7)

As per claims 10, 12 and 13, Mandava discloses changing the format of the parameter value combinations before (b), including validating the parameter value combinations by comparing the parameter value combinations to a set of rules (step 606, Fig. 6; *rule may not applied* – para 0119, 0120, pg. 11-12; para 0143-0144, pg. 13); wherein parameter

value combinations are validated on demand prior to (b) (see *rules* - para 0119, 0120 in light of the writer of assertion – see para 0112-0113, pg. 11, i.e. demand for a assertion to be validated from the writer and from a user request – see Fig. 2).

As per claims 14, 16, Mandava discloses a medium (see computer – para 0013).

As per claim 17, Mandava discloses a computer-readable medium containing computer-executable components comprising:

an import component that extracts parameter value combinations from a data file marked up with a markup language (e.g. Fig. 3D-1, 2, 3; Fig. 3F-1, 2 – Note: parsing a XML/DTD tag and definition of tag reads on extracting);

a test object creation module that creates an object to test a software module with the parameter value combinations (Fig. 3G).

As per claim 18, Mandava discloses the markup language comprises the extensible markup language (re claim 3).

As per claim 19, Mandava discloses wherein the import module validates the parameter value combinations (refer to claims 12-13).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 11, 15, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mandava et al., USPubN: 2004/0128584; further in view of Takahashi, USPubN: 2003/0163802 (hereinafter Takahashi)

As per claim 11, Mandava does not explicitly disclose receiving a table of parameter value combinations at a spreadsheet application; and converting the table to the data file with a spreadsheet plug-in.

But based on table as suggested via Chapter of requirement specification from which to formulate XML/DTD file of assertions in terms of markup parameter definition by Mandava (see Fig. 1B-1, *chapter, table 5* – para 0119, 0121), the table of parameters is suggested. Using a table of parameters to depict parameters listing and corresponding definition thereof for set up test application was further disclosed via a file being sent to other network services as by Takahashi, wherein a form of marshalling of network transmitted data files (see Takahashi : Fig. 1) by Takahashi server suggests the format of analogous to the markup files by Mandava. Further, Takahashi discloses providing of table of parameters and definition thereof for a receiving test server to convert the table file into test executable, i.e. a plug-in to convert files (see Takahashi: Figs. 2-6). Hence, it would have been obvious for one skilled in the art to implement the chapter and table of specification of Mandava as mentioned above so that they are spreadsheet data -- as these are analogized to the 2D tables of parameter definitions by Takahashi. At the time that the invention was made, the Spreadsheet technology having its internal macro to facilitated dynamic update of data cells was a well-known concept, and one skill in the art would be motivated to implement such spreadsheet as above. One would be motivated to do so because based on Takahashi's algorithm to update a temporary file using

deletion option (see para 0033, Figs. 6-13) in the process of finalizing a file of translated parameter collection, the use of spreadsheet with its macro editing functions would enhance such dynamic update of parameter translation files to support Mandava's assertion markup files (Note: the very nature of XML is that they are extensible); that is, these can be fine tuned with the Spreadsheet macro options just like Takahashi' temporary file are being dynamically updated using as input the 2D table of parameters; and this is consistent with flexible aspect by Mandava by which test coverage can be modified (see *there is a need* - para 0009, pg. 1) hence enhancing it by continual updating of requirements via feedback from Mandava's test suites evaluation and testing tool.

As per claim 15, Mandava discloses a medium (see computer – para 0013) for performing the steps recited in claim 11.

As per claim 20, Mandava discloses generating a table of parameter value combinations, the method comprising:

receiving a plurality of parameter value combinations (e.g. see Fig. 1B-1, *chapter, table 5* – para 0119, 0121); and formatting the plurality of parameter value combinations into a table marked up with a markup language (e.g. Test *suite* - Fig. 5; Fig. 1B-1, *assertion Document, static XML* - Fig. 3A; para 0067 - 0071).

But Mandava does not disclose receiving parameter combinations from a spreadsheet; but this limitation has been addressed in claim 11.

As per claim 21, Mandava wherein elements of the table represent test cases (e.g. Fig. 3A, B, C, D, E, F; Fig. 3G).

Response to Arguments

9. Applicant's arguments filed 2/6/07 have been fully considered but they are not persuasive. Following are the Examiner's observation in regard thereto.

Specifications Objections:

(A) Applicants have submitted that the use of table is not inconsistent (Appl. Rmrks pg. 5); and that in programming table can be implemented as records, linked list or data structures like arrays. The language as to include a table in a file is not remotely connected to the connotation that table data can be implementing as programming constructs like linked list or array structures. There is a big difference between data being implemented in some constructs and table included in a XML file. The objection is now a claim objections and the language as to 'include a table in a file' in light of the XML file shown in Figure 3 requires correction, as set forth now in the Claim Objections.

35 USC § 101 Rejection:

(B) Applicants have submitted that 'data structure stored ... computer-readable medium ... increases computer efficiency ... are statutory' based on re Lowry (Appl. Rmrks pg. 7, middle). The rejection has pointed what is lacking in the claim in order to convey that the stored structures when read by a computer cannot on their own trigger interaction among themselves if there was no functional component to realize the usefulness intrinsic to the structures. The structures thus stored are mere non-functional descriptive material without support of a functional element. No reasonable teaching from the claim conveys that the parameters when read by a computer will interact with anything in order to yield data transformation or tangible

optimized program code. The argument is not persuasive. The claims 1-4 in question remain non-statutory.

35 USC § 102 Rejection:

(C) Applicants disagreed that Mandava Table 1 map what is recited as 'set of testing parameters listed in a parameter order' and that Mandava's para 0071, 0074 actually represent what is recited as 'second section ... parameter values listed ... each value is positioned ... same order as the corresponding ... parameter order' (Appl. Rmrks pg. 8, 2nd para). First, 'parameters listed in a parameter order' is a phreaseology does not make it clear how this listing is particularly effectuated; that is, the language is not only broad but rather superfluous in repeating a same concept, thus lacks details that would enforce any distinguishing feature. Therefore it has been treated as a listing of parameter of some order. The opening and closing tags of Mandava represent such order of listed elements (Table 1, pg. 5; *describes* --para 0068, 0069, 0070 pg. 5 – Note: each enclosing tags reads on parameter listed to define a enclosed element). Second, a assertion is a predicate that dictates a rule and a result that needs to be checked or evaluated (emphasis added to result to be evaluated) in order to validate whether the predicate stands. Mandava teaches assertion statements each of which is provided in a list of parameters, wherein each parameter as listed is followed by an asserted definition corresponding to the position of the very parameter. This definition (see para 0071, 0074, pg. 5) is viewed as parameter value to be checked/evaluated in view of the above-mentioned predicate concept of an assertion; and when this definition of the parameter falls inside each parameter as the parameter is laid out, the limitation recited as 'position in the same order as the corresponding parameter' listed in some order has been met. The rejection has shown this parameter value in that same order and

position as the listed enclosing tags set forth above to represent the parameter of the first section (*defines* --para 0071, 0074, pg. 5 – Note: for each enclosing pair of tags that describes, a definition of such pair of enclosing tags being the value inside the enclosing tag reads on parameter values listed in same order as the list of parameters being listed). The claim does not enforce any particular specifics to enforce a unique interpretation to terms such as parameter *order* or parameter *value* so to preclude Mandava's ordered assertion statements (included asserted definition of a parameters) from mapping the claimed features as they are interpreted using broad interpretation. Parameter value, for example, can be interpreted as some quantity or logical state that needs to be evaluated; and in view of the Table 1 asserted definition, the evaluation as to validate the correctness of the assertion (e.g. to yield this logical TRUE or FALSE) entails that a value has been evaluated, i.e. Mandava's asserted definition being enclosed with tags reads on parameter value. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language (emphasis added) of the claims patentably distinguishes them from the references.

(D) Applicants have submitted that for claim 6, Mandava's Fig. 3D –1,2,3 describing assertions do not show parameter value combinations, which are extracted from a markup file (Appl. Rmrks pg. 9, top half). In order to provide how a combination of values is implemented, sufficient teaching is expected to be put forth how this combination is being done; because 'combination' entails a broad range of action, variety of arrangements; and absent from the claim any more specifics as to how the parameter values are combined, a broad reasonable interpretation has to be imparted to this concept of 'combination' as it is presented. Mandava's

testing environment utilizes XML assertion documents (see Table 1, Table 8) to provide specifications for the test suites to be effectuated and executed. The way each asserted requirement is laid out in such one of these markup assertions documents represents a particular combinations of requirements, assertions or sub-assertions; and based on the rationale as set forth in section B to address the *parameter value* limitation, such one instance of combined assertion specifications reads on one combination of parameter values. The rejection citing of Fig. 3D -- wherein assertions are being tested and validated, as they are read from the assertion documents in XML form-- is therefore meeting the limitations of claim 6. The argument raised against Mandava's GUI allowing an user to determine assertions to be inserted as test suite does not fall under the teachings derived (by one of ordinary skill in the art) from interpreting the claim language; hence would be deemed misplaced.

(E) Applicants have submitted (Appl. Rmrks pg. 9, bottom) that 'extracts parameter value combinations from ... markup language' of claim 17 is not taught from Mandava's Fig. 3D. It is noted that extracting a combination of values (as opposed to just extracting one value) entails significant underlying sub-actions; and since the claim does not provide a faintest teaching as to how this extracting is done, the limitation is construed as mere reading (out) of parameter values as these are structured in one combination represented in a markup form. Further, this argument is referred back to section D above.

35 USC § 103 Rejection:

(F) Applicants have submitted that the Office Action does not provide any indication of what is considered a parameter, a parameter value or plurality of parameter value combinations (Appl. Rmrks pg. 10, middle). First, the above argument falls under the ambit of the argument being

addressed in section C; hence is referred thereto. Second, the argument seems to be ignoring that the rejection is a combination of teachings; and in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

(G) Applicants have submitted (for claim 11, Appl. Rmrks pg. 10, bottom, pg. 11, top) that the Office Action fails prima facie in not providing explanation as to why one skilled in the art would be motivated to dynamically update cells data since Mandava does not teach any suggestion of so doing. The requirements leading to establishing of assertions documents in view of Mandava's dynamic fine-tuning of such requirements by the test suites environments and an explicit need to provide flexible test environment fine tuning using extensible specification format. According to which the Office Action has provided:

At the time that the invention was made, the Spreadsheet technology having its internal macro to facilitated dynamic update of data cells was a well-known concept, and one skilled in the art would be motivated to implement such spreadsheet as above. One would be motivated to do so because based on Takahashi's algorithm to update a temporary file using deletion option (see para 0033, Figs. 6-13) in the process of finalizing a file of translated parameter collection, the use of spreadsheet with its macro editing functions would enhance such dynamic update of parameter translation files to support Mandava's assertion markup files (Note: the very nature of XML is that they are extensible); that is, these can be fine tuned with the Spreadsheet macro options just like Takahashi' temporary file are being dynamically updated using as input the 2D

table of parameters; and this is consistent with flexible aspect by Mandava by which test coverage can be modified (see there is a need - *para 0009, pg. 1) hence enhancing it by continual updating of requirements via feedback from Mandava's test suites evaluation and testing tool.*

A prima facie rationale is deemed supported by a rationale evoking Mandava's desirability of a flexible specifications of requirement which when combined with the Spreadsheet methodology would enhance dynamic and continual updating of requirements via feedback from Mandava's, extensible language, and test suites evaluation and user-driven testing tool. The argument is therefore not sufficient to overcome the rejection.

In all, the claims stand rejected as set forth in the Office Action.

Interview Summary

10. The Applicant's representative, Charles Miller, was approached 4/12/07 in order to come to a mutual agreement as to put forth specifics to the claimed steps of using a markup (tagged) parameter list (or ordered values) in a particular way to support the creation or execution of a test program, i.e. via communicating with each section of the listed parameter (or value) in order to provide distinguishing teaching; but no consumated agreement has been attained.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (272) 272-3735. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)272-3756.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3735 (for non-official correspondence - please consult Examiner before using) or 571-273-8300 (for official correspondence) or redirected to customer service at 571-272-3609.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan A Vu
Patent Examiner,
Art Unit 2193
April 18, 2007